

AD-A020 878

SPECIAL DATA COLLECTION ON SYSTEM EVENT REPORT.  
GULF OF CALIFORNIA, 8 JULY 1975

J. R. Woolson, et al

Teledyne Geotech

Prepared for:

Air Force Technical Applications Center

19 November 1975

DISTRIBUTED BY:

**NTIS**

National Technical Information Service  
U. S. DEPARTMENT OF COMMERCE

057179



ADA020878

**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT**  
**Gulf of California, 8 July 1975**

**J.R. Woolson, D.D. Solari, M.S. Dawkins, K.J. Hill, and R.J. Markle**  
**Alexandria Laboratories**

**Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314**

**October 1975**

**APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.**

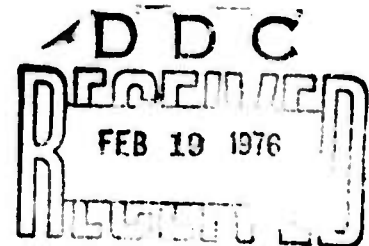
**Sponsored By**

**The Defense Advanced Research Projects Agency**  
**Nuclear Monitoring Research Office**  
**1400 Wilson Boulevard, Arlington, Virginia 22209**  
**ARPA Order No. 2897**

**Monitored By**

**VELA Seismological Center**  
**312 Montgomery Street, Alexandria, Virginia 22314**

Reproduced by  
**NATIONAL TECHNICAL  
INFORMATION SERVICE**  
U.S. Department of Commerce  
Springfield VA 22151



97

A

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER SDCS-ER-75-31	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle)  SPECIAL DATA COLLECTION SYSTEM (SDCS) Gulf of California, 8 July 1975		5. TYPE OF REPORT & PERIOD COVERED  Technical
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Woolson, J. R., Solari, D. D., Dawkins, M. S. Hall, K. J., and Markle, R. J.		8. CONTRACT OR GRANT NUMBER(s) ✓ F080606-74-C-0013
9. PERFORMING ORGANIZATION NAME AND ADDRESS Teledyne Geotech 314 Montgomery Street Alexandria, Virginia 22314		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS  T/4703
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Advanced Research Projects Agency Nuclear Monitoring Research Office 1400 Wilson Blvd.-Arlington, Virginia 22209		12. REPORT DATE 19 November 1975
		13. NUMBER OF PAGES 17
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) VELA Seismological Center 312 Montgomery Street Alexandria, Virginia 22314		15. SECURITY CLASS. (of this report)  Unclassified
		15a. DECLASSIFICATION DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		

Gulf of California, 8 July 1975

	Origin Time	Latitude	Longitude	$m_b$	$M_s$
NORSAR	09:37:29	30 N	114 W	5.8	N/A
PDE	09:37:24	29.6N	113.4W	N/A	6.8
Hagfors Array, Sweden	09:37:23	28 N	111 W	5.5	6.0

09:37:23.1 29.2N 113.4W 6.0 N/A

Short period signals associated with this event were recorded at all SDCS stations and LASA. NORSAR data was obtained from their bulletin, the TAL transmission was not recoverable. The operating gains of the vertical and east SP channels at CPSO were unknown.

Details of the program used to obtain vertical, radial and transverse long-period data at LASA are in the process of being reviewed. The vertical beam is probably valid while the horizontal beams are questionable.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA. LASA SP scaling factors are millimicrons per inch.

[illegible]

# STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION	
				SHORT-PERIOD	LONG-PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CF50	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be 316° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

### HYPOCENTER DETERMINATION

INPUT FOR EVENT                      8 JUL 75  
 09:37:29.0    28.999N    113.000W    0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	REST	REST	REST
LAC	09 41 37.8	0.5	0.6	18.3	15.9
CPO	09 42 41.1	-0.3	-0.0	24.3	67.6
RK-ON	09 42 57.4	-1.0	-1.4	26.2	29.0
FN-WV	09 43 28.3	-0.2	-0.1	20.5	62.6
WH2YK	09 44 13.4	-0.3	-0.1	34.7	341.5
HN-ME	09 44 52.4	0.8	0.6	39.2	51.6
NAC	09 49 31.1	0.6	0.3	79.5	24.3

#### 67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
09:37:31.1	29.415N	113.282W	49. CAIC	0.6	3	7
09:37:23.1	29.192N	113.403W	0. FEST	0.7	3	7

CAIC				REST			
	1	.	2		1	.	2
0	.	.	1	0	.	.	1
0	0.	2	1	0	0.	2	1
.	.	.	.	.	.	.	.
0	0.	0	0	0	0.	0	0
0	.	.	0	0	.	.	0
0	0.	0		0	0.	0	

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF..LEVEL, SDV= 1.41  
 MAJOR    74.0KM. MINOR    35.8KM. AZ=    30    AREA=    8324 SQ.KM.    FEST

# DATA SUMMARY

INPUT FOR EVENT 8 JUL 75  
09:37:29.0 28.998N 113.000W 0KM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIP	DIST
		TIME					MB	MS		
LAO M	EP	09 41 37.8		SAB	1.6	1294.	5.75			18.3
CPO	EP	09 42 41.1		SPZ	0.0	CLIPPED				
RK-ON	EP	09 42 57.4		SPZ	1.1	1742.	6.36			26.2
FW-WV	EP	09 43 28.3		SPZ	0.0	CLIPPED				
WH2YK	EP	09 44 13.4		SPZ	2.3	536.	6.13			30.7
HN-ME	EP	09 44 52.4		SPZ	1.2	248.	5.49			30.2
NAC	EP	09 49 31.1		AB	1.5	300.	5.93			70.5

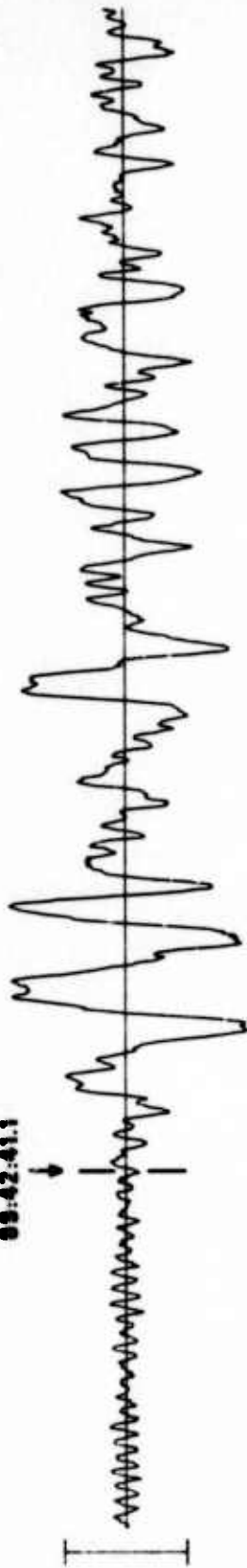
ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA
09:37:31.1	29.415N	113.282W	49. CALC	5.98	0.28	4
09:37:23.1	29.192N	113.403W	0. BEST	5.98	0.37	4

Short-period magnitudes (mb) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

CP-S0 08 JUL 75

SPZ  
UNKNOWN

09:42:41.1



SPN  
118.90 MP



SPE  
UNKNOWN



10 SEC

\*CALIBRATIONS UNREADABLE



**RK-ON 08 JUL 75**

**09:42:57.4**



**SPZ  
852.38 MHz**



**SPR  
183.61 MHz**



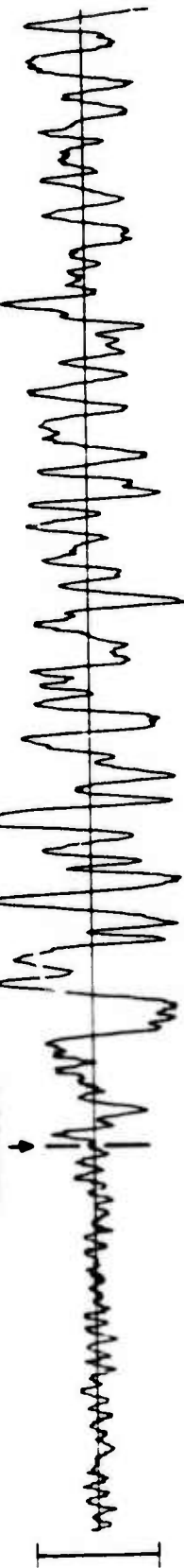
**SPT  
88.54 MHz**



**10 SEC**

FN-WV 08 JUL 75

09:43:28.3

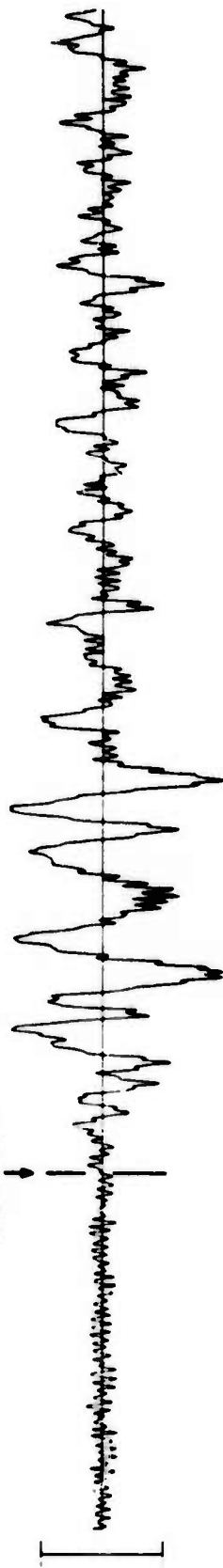


10 SEC

WH2YK 08 JUL 75

S7Z  
65.58 Mμ

09:44:13.4



SPR  
47.02 Mμ



SPT  
27.97 Mμ



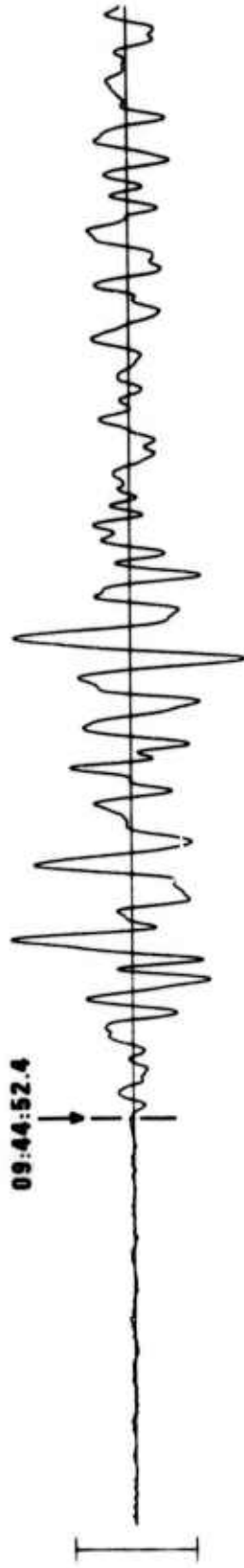
TIME

10 SEC

09:44:30

HN-ME 08 JUL 75

SPZ  
111.54 MHz



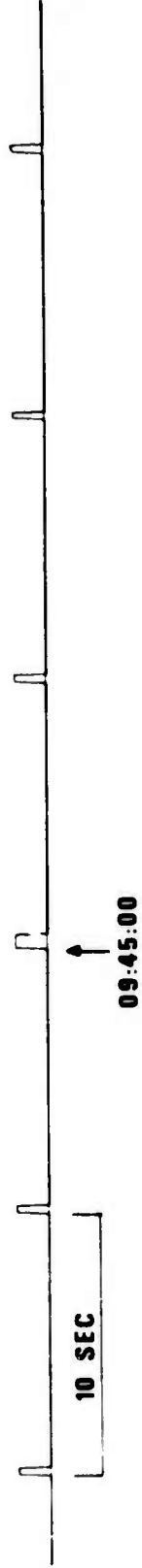
SPR  
68.37 MHz



SPT  
29.56 MHz

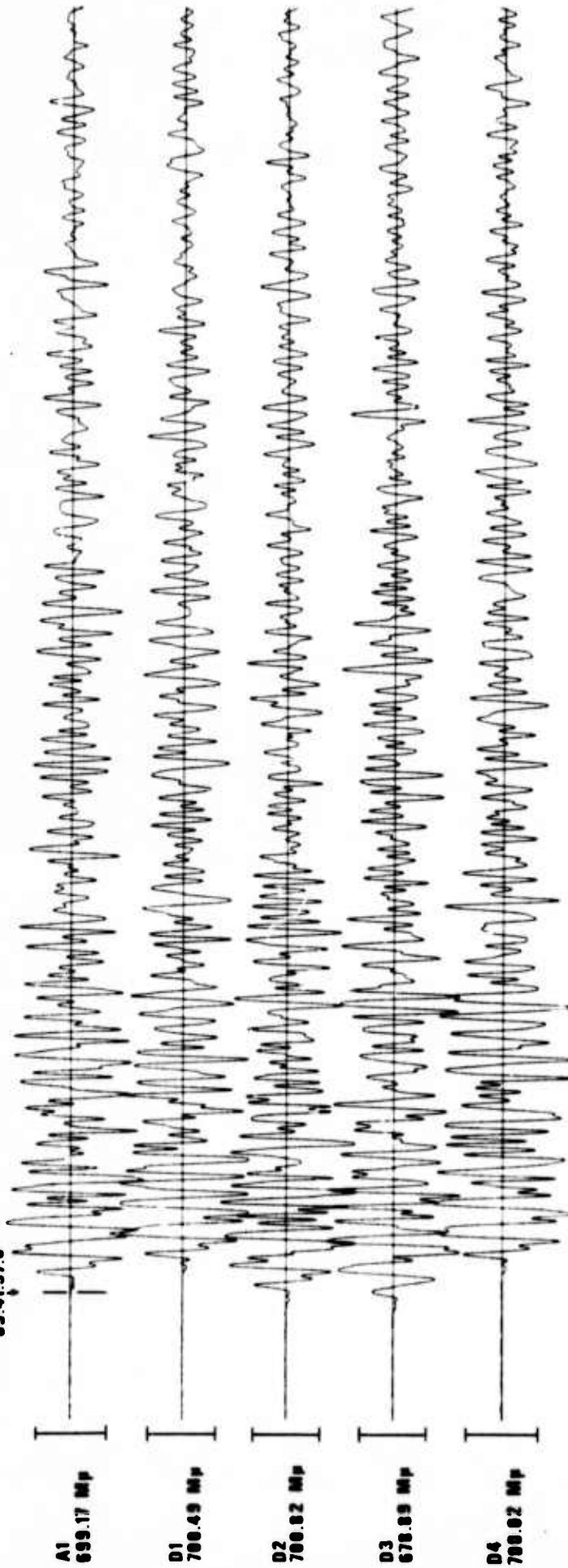


TIME



LASA INFINITE VELOCITY SUBARRAY SUMS 08 JUL 75

09:41:37.0



20 SEC

CP-SO 08 JUL 75

LPZ  
UNKNOWN



LPH  
UNKNOWN



LPE  
INOP



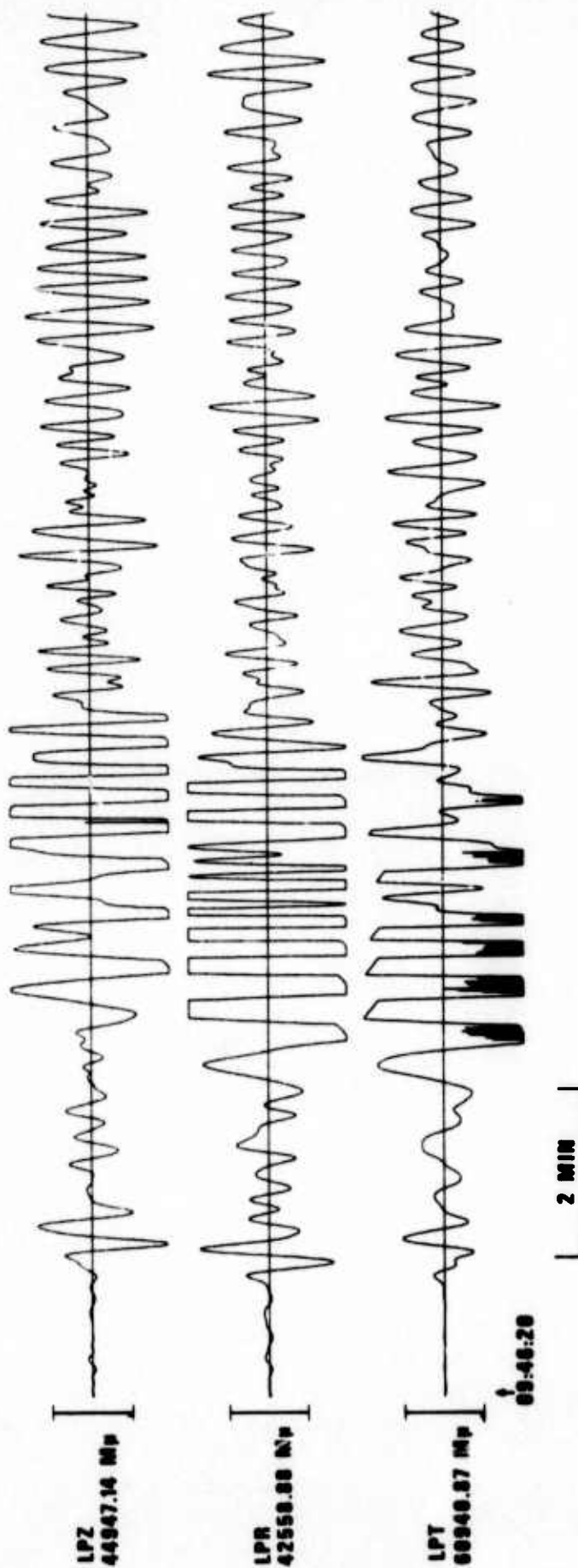
TIME



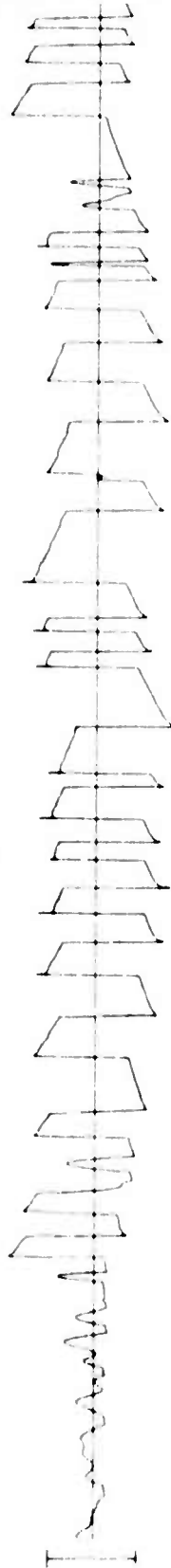
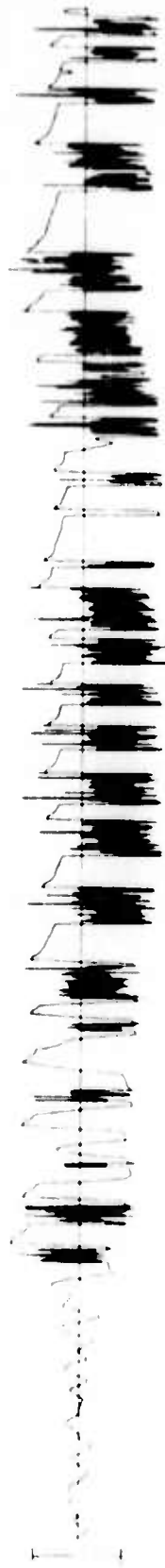
00:50:00

\*CALIBRATIONS INVALID

RK-ON 08 JUL 75



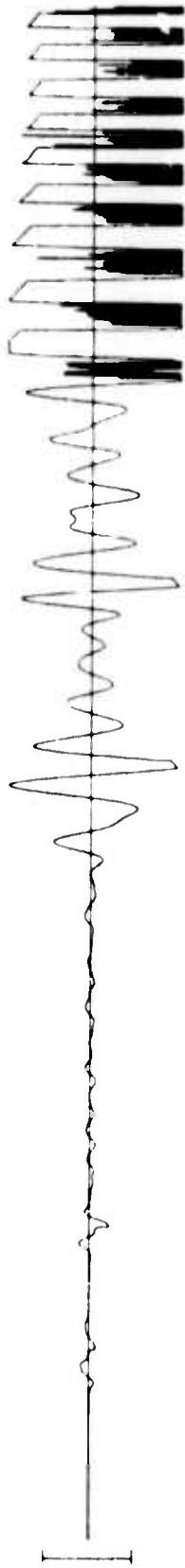
FN-WV 08 JUL 75



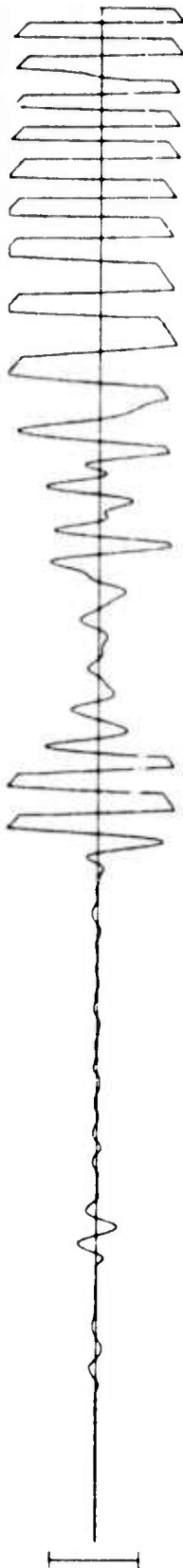


WH2YK 08 JUL 75

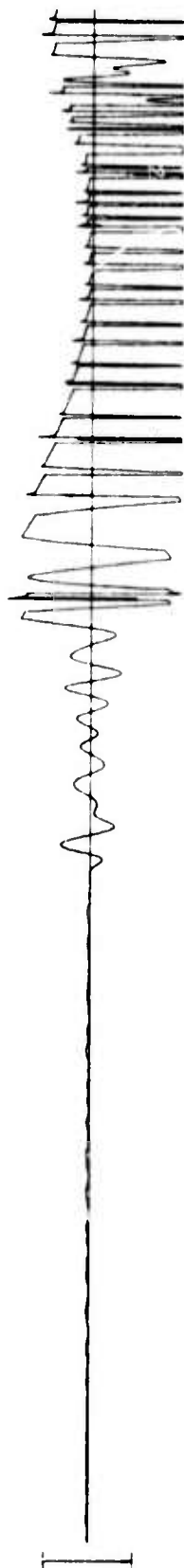
LPZ  
25610.00 Mp



LPR  
31715.12 Mp



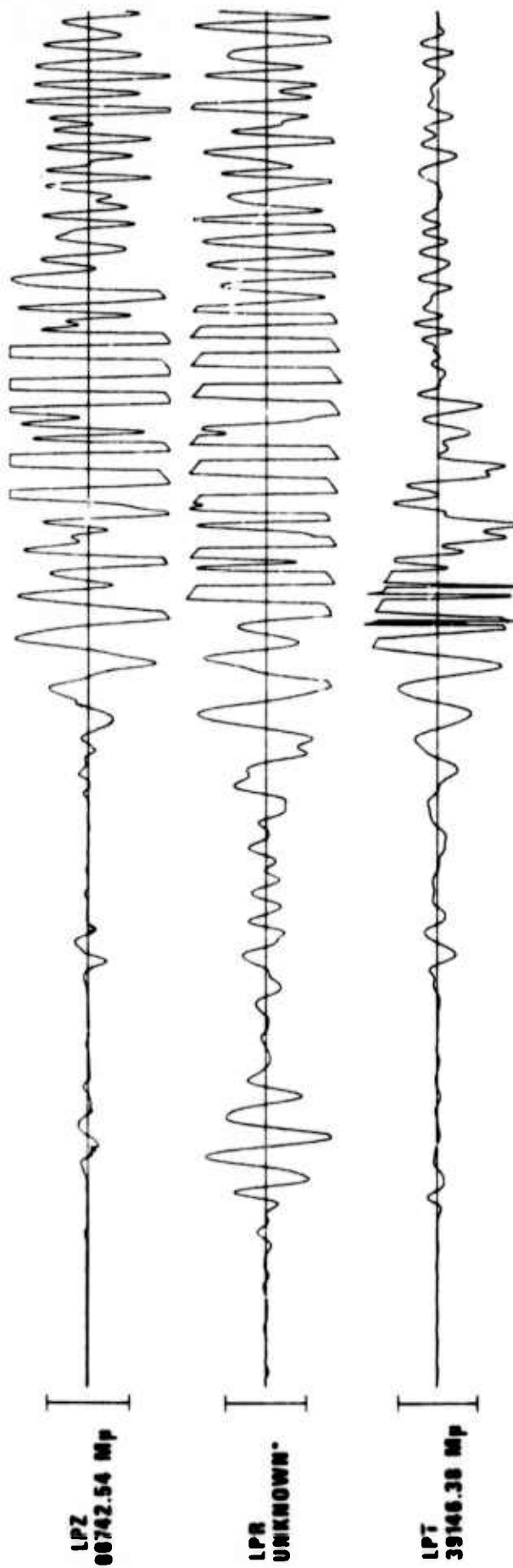
LPT  
20043.10 Mp



TIME



HN-ME 08 JUL 75

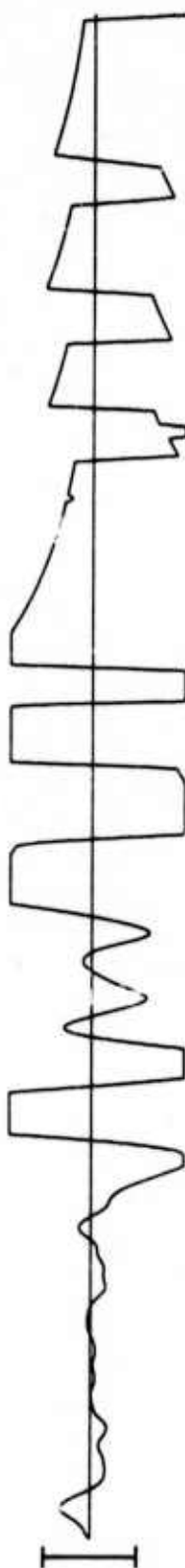


LASA C4 SUBARRAY LONG PERIOD 08 JUL 75

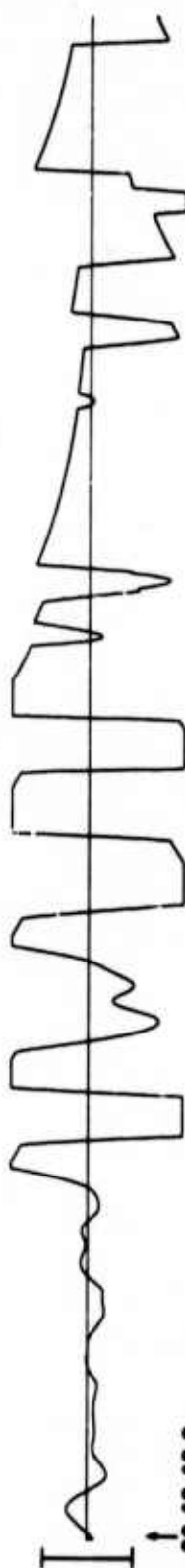
C4LZ  
41900 MP



C4LN  
43500 MP



C4LE  
43500 MP



09:43:42.0

1 MIN